

COMPLETE LISTING OF THE CLAIMS

1. (previously presented) A process for delivering a protein or peptide to an extravascular cell in a mammalian target tissue in vivo comprising: inserting an injection solution containing the protein or peptide into the lumen of an efferent or afferent vessel of the target tissue wherein the volume of the injection solution and the rate of injection solution insertion cause transient increased vascular permeability in the target tissue, increased extravascular fluid volume within the target tissue, swelling of the target tissue, and extravasation of the protein or peptide via the increased vascular permeability, resulting in delivery of the protein or peptide to the extravascular cell.
2. (original) The process of claim 1 wherein fluid flow out of the target tissue is occluded.
3. (canceled)
4. (previously presented) The process of claim 1 wherein the protein or peptide consists of a biologically active protein or peptide.
5. (canceled)
6. (previously presented) The process of claim 5 wherein the protein or peptide is greater than 5 kDa.
7. (previously presented) The process of claim 6 wherein the protein or peptide is greater than 30 kDa.
8. (previously presented) The process of claim 7 wherein the protein or peptide is greater than 500 kDa.
- 9-11. (canceled)
12. (previously presented) The process of claim 1 wherein the protein or peptide consists of a therapeutic molecule.
13. (previously presented) The process of claim 1 wherein the protein or peptide is in a complex.
14. (previously presented) The process of claim 1 wherein the injection solution contains a compound that increases vessel permeability.
15. (original) The process of claim 14 wherein the compound consists of a vasodilator.
16. (original) The process of claim 1 wherein the cell consists of a liver cell.
17. (original) The process of claim 16 wherein the liver cell consists of a hepatocyte.

18. (original) The process of claim 1 wherein the cell consists of a skeletal muscle cell.
19. (original) The process of claim 1 wherein the cell consists of a heart muscle cell.
20. (original) The process of claim 1 wherein the cell consists of a prostate cell.
21. (original) The process of claim 1 wherein the vessel consists of a blood vessel.
22. (original) The process of claim 21 wherein the blood vessel consists of an artery.
23. (original) The process of claim 21 wherein the blood vessel consists of a vein.
24. (original) The process of claim 1 wherein the vessel consists of a bile duct.
25. (original) The process of claim 1 wherein the injection solution contains less than 20 mM salt.
26. (original) The process of claim 25 wherein the injection solution contains less than 5 mM salt.
27. (original) The process of claim 1 wherein the injection solution contains zwitterions.
28. (withdrawn) The process of claim 1 wherein the injection solution is hypotonic.
29. (original) The process of claim 1 wherein the injection solution is hypertonic.
30. (previously presented) A process for delivering a protein or peptide to an extravascular in vivo mammalian cell in a target tissue comprising: rapidly inserting a sufficient volume of injection solution containing the protein or peptide into the lumen of an efferent or afferent vessel of the target tissue and impeding fluid flow away from the tissue during the injection such that extravascular fluid volume in the tissue is transiently increased, resulting in swelling of the target tissue, increased vascular permeability in the target tissue, extravasation of the protein or peptide and delivery of the protein or peptide to the extravascular mammalian cell in the tissue.

LISTING OF CLAIMS READABLE ON ELECTED SPECIES

1. (previously presented) A process for delivering a protein or peptide to an extravascular cell in a mammalian target tissue in vivo comprising: inserting an injection solution containing the protein or peptide into the lumen of an efferent or afferent vessel of the target tissue wherein the volume of the injection solution and the rate of injection solution insertion cause transient increased vascular permeability in the target tissue, increased extravascular fluid volume within the target tissue, swelling of the target tissue, and extravasation of the protein or peptide via the increased vascular permeability, resulting in delivery of the protein or peptide to the extravascular cell.
2. (original) The process of claim 1 wherein fluid flow out of the target tissue is occluded.
4. (previously presented) The process of claim 1 wherein the protein or peptide consists of a biologically active protein or peptide.
5. (canceled)
6. (previously presented) The process of claim 5 wherein the protein or peptide is greater than 5 kDa.
7. (previously presented) The process of claim 6 wherein the protein or peptide is greater than 30 kDa.
8. (previously presented) The process of claim 7 wherein the protein or peptide is greater than 500 kDa.
12. (previously presented) The process of claim 1 wherein the protein or peptide consists of a therapeutic molecule.
13. (previously presented) The process of claim 1 wherein the protein or peptide is in a complex.
14. (previously presented) The process of claim 1 wherein the injection solution contains a compound that increases vessel permeability.
15. (original) The process of claim 14 wherein the compound consists of a vasodilator.
16. (original) The process of claim 1 wherein the cell consists of a liver cell.
17. (original) The process of claim 16 wherein the liver cell consists of a hepatocyte.
18. (original) The process of claim 1 wherein the cell consists of a skeletal muscle cell.
19. (original) The process of claim 1 wherein the cell consists of a heart muscle cell.

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21. (original) The process of claim 1 wherein the vessel consists of a blood vessel.
22. (original) The process of claim 21 wherein the blood vessel consists of an artery.
23. (original) The process of claim 21 wherein the blood vessel consists of a vein.
24. (original) The process of claim 1 wherein the vessel consists of a bile duct.
25. (original) The process of claim 1 wherein the injection solution contains less than 20 mM salt.
26. (original) The process of claim 25 wherein the injection solution contains less than 5 mM salt.
27. (original) The process of claim 1 wherein the injection solution contains zwitterions.
29. (original) The process of claim 1 wherein the injection solution is hypertonic.
30. (previously presented) A process for delivering a protein or peptide to an extravascular in vivo mammalian cell in a target tissue comprising: rapidly inserting a sufficient volume of injection solution containing the protein or peptide into the lumen of an efferent or afferent vessel of the target tissue and impeding fluid flow away from the tissue during the injection such that extravascular fluid volume in the tissue is transiently increased, resulting in swelling of the target tissue, increased vascular permeability in the target tissue, extravasation of the protein or peptide and delivery of the protein or peptide to the extravascular mammalian cell in the tissue.